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Good morning Mr. Chairman and members of the Subcommittee. My name is John German and I am Manager of Environmental and Energy Analysis with American Honda Motor Company. We thank you for the opportunity to provide Honda's views on the subject of hybrid vehicles and their role in the nation's efforts to reduce its consumption of petroleum.

Hybrid technology offers very significant opportunities for improving vehicle fuel economy and that is one of the reasons why Honda was an early adopter of the technology. It is important to point out, however, that global demand for transportation energy is so immense that no single technology can possibly be the solution. There is no magic bullet – we are going to need rapid development and implementation of as many feasible technologies as possible.

Honda has a long history of being a technology and efficiency leader. Our overall philosophy is to be a company that society wants to exist. One of the results of this philosophy is Honda's leadership on hybrid vehicle development. We introduced the first hybrid vehicle in the US in 1999, the Honda Insight. This vehicle was designed to showcase the potential of hybrids and advanced technology. The Civic Hybrid, introduced in 2002, was the first hybrid powertrain offered as an option on a mainstream model. The Accord Hybrid was the first V6 hybrid. The 2006 Civic Hybrid incorporated significant improvements to the battery, electric motor, and hybrid operating strategy to improve both efficiency and performance.

Honda's commitment to reduce energy consumption extends beyond hybrid vehicles. As the world's biggest producer of internal combustion engines, there is much that has already been done to make those engines more efficient and substantially more that can be done in the future. For example, Honda pioneered variable valve timing in the early 1990s and we now use it on 100% of our vehicles. Similarly, virtually all of our engines are aluminum block with overhead camshafts and 4-valves per cylinder; and all of our transmissions have at least five speeds. All of these technologies are making our vehicles more fuel efficient. For the future, Honda has announced plans to introduce within the next two years a more advanced version of Honda's four-cylinder i-VTEC technology with up to a 13 percent improvement in fuel efficiency over 2005 levels, and a more advanced Variable Cylinder Management (VCM) technology for six-cylinder engines with up to an 11 percent improvement in fuel efficiency. Honda also has announced its intention to introduce within three years a clean diesel vehicle, meeting stringent clean air standards and achieving up to 30% better fuel economy.

Honda also believes that alternative fuels offer significant potential. We are the only company that continues to offer a dedicated compressed natural gas vehicle, the third generation Civic GX.

We recently introduced a home natural gas refueling station that will expand the market beyond fleets to retail customers. We were the first company to certify a fuel cell vehicle with the EPA and the first to lease a fuel cell vehicle to an individual customer.

Development of hybrid vehicles needs to be viewed within this context. Hybrids have a lot of potential, but to achieve significant market penetration they must be able to compete, in terms of cost, performance and utility, with advanced gasoline and diesel engines. In this regard, the most important factor is to continue to reduce the cost, size, and weight of the battery pack. We have found that today's hybrid customers are most interested in fuel cost savings. But at this juncture, mainstream customers do not value the fuel savings as highly and hybrid sales represent only about 1% of annual sales. Market penetration will increase as the costs are reduced in the future.

Taking what we have learned, Honda's next step in hybrid vehicle development will be the introduction of an all-new hybrid car to be launched in North America in 2009. This new hybrid vehicle will be a dedicated, hybrid-only model with a target price lower than that of the current Civic Hybrid. We are targeting an annual North American sales volume of 100,000 units, mostly in the United States, and 200,000 units worldwide.

As you know, Mr. Chairman, Congress has enacted a program of consumer incentives to encourage the purchase of hybrid vehicles. We believe the current incentive program is flawed in two respects. First and foremost, there should be a change in the metric used to calculate the value of the credit that would more accurately reflect how the vehicles are actually being operated. Currently, the incentives are calculated using a city only fuel economy metric. Honda suggests a change to a combined (city/highway) metric. Most drivers use their vehicles for both city and highway driving and the incentive metric should reflect that reality. In addition, the 60,000 per manufacturer vehicle cap should be replaced. It creates market distortions which benefit manufacturers who have not sold their quota of vehicles or who have been slow to enter the market. If Congress is going to maintain an incentive program, it should consider one in which the customers of all manufacturers have the same access to the incentive program at the same time. For example, the current program could be replaced with a three-year incentive program with 100% of the value of the credit available in 2007, 50% in 2008 and 25% in 2009. The incentive would sunset in 2010.

The ability for hybrids to reduce fuel consumption and greenhouse gas emissions is proportional to the efficiency improvements and market share. If hybrids increase to 5% market share, this will reduce in-use fuel consumption and CO₂ emissions by 1-2%. A 10% market share will offer 2-4% reductions. Note that there is nothing distinctive to hybrids about these effects. The same benefit could be obtained by raising the overall fleet fuel economy using conventional gasoline technology or introducing diesel engines.

I also want to address the issue of ethanol. There is an important role for ethanol in reducing U.S. consumption of petroleum. Some are suggesting that we use the ethanol we currently are producing to make a fuel that is 85% ethanol (called "E-85"). The problem with that approach is that vehicles have to be specially engineered to run on E-85. E-85 also requires a separate distribution system and separate pumps. The cost of installing pumps alone is in the tens of thousands of dollars per station. Also unknown is whether customers will accept 25% lower

fuel economy with E-85 and more frequent trips to the gas station. We believe that instead of using our ethanol to create E-85 fuels, it should instead be blended with gasoline at up to 10% levels ("E-10"). Unlike E-85, E-10 does not require a whole new infrastructure and vehicles already on the road can operate safely on E-10. The nation's objective of reducing petroleum consumption by using ethanol can be more efficiently and effectively achieved with E-10 rather than E-85.

As Honda has previously announced, we believe it is time for the Federal government to take action to improve vehicle economy. Performance requirements and incentives are the most effective policy instruments, as they allow manufacturers to develop and implement the most cost-effective solutions. One example would be to increase the CAFE standards. The NHTSA already has the authority to regulate vehicle efficiency and Honda has called upon the agency to increase the stringency of the fuel economy requirements and has supported efforts to reform the passenger car standards. At the same time, Congress should develop a program of broad, performance-based incentives to stimulate demand in the marketplace to purchase vehicles that meet the new requirements.

The other effective action the government can take is research into improved energy storage. The success of electric drive technologies, including hybrids and fuel cells, depends on our ability to build less expensive, lighter and more robust energy storage devices. The Department of Energy's work in this area should be supported and funded by Congress.

I appreciate the opportunity to present Honda's views and would be happy to address any questions you may have.